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ABSTRACT

This study attempted to understand and define the concepts of creativity and self-actualization and to ascertain, first, if creative people are highly self-actualized, and second, if self-actualized people are highly creative. Four tests (Personal Orientation Inventory, Torrence Tests of Creative Thinking, Similes Preference Inventory, Lafferty's Life Style Checklist) were administered and data collected on 177 graduate and undergraduate students. Results showed a positive, statistically significant correlation between originality and elaboration on the TTCT and between the POI self-actualization scale and the Human Synergistic Life Styles self-actualization scale. However, there were no correlations between either of the two creativity measures or either of the two self-actualization measures. While the data suggest that highly creative people may be more self-actualized and that highly self-actualized people may be more creative, these hypotheses are not measured in the study. (Author/PC)

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SELF-ACTUALIZATION AND CREATIVITY

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SELF-ACTUALIZATION AND CREATIVITY

INTRODUCTION

Are creative people highly self-actualized? Are self-actualized people highly creative? Many authors seem to use these concepts synonymously. This research project is an attempt to understand and define these two concepts more clearly, and to answer these questions.

REVIEW OF THE LITERATURE

Weisskopf (1959) explains Maslow's interpretation of self-actualization as being identified with integration, psychological health, individuation, autonomy, creativity and productivity. It is the ultimate human goal. Self-actualization is propelled by the innate tendency toward growth.

Maslow (1959) says there is within the human being "a pressure toward unity of personality, toward spontaneous expressiveness, toward full individuality and identity, toward seeing the truth rather than being blind, toward being creative, toward being good (page 126)." All these forms of self-actualization imply "good values, serenity, kindness, courage, honesty, love, unselfishness and goodness (page 126)."

Maslow seems to include creativity as one way of expressing self-actualization. Weisskopf interprets it that the concepts of self-actualization and psychological health contain value elements. What is good functioning, creativity, and productivity? Weisskopf asks why are such generally recognized virtues as kindness, love, and unselfishness the result of self-actualization and why does Maslow exclude such obvious phenomena of "self-realization" as aggression, destruction, hostility,

domination, egotism? Weisskopf suggests a criterion of higher logical order is needed to separate the positive from the negative strands in self-actualization. Maslow does not use the term self-actualization to mean simply living out any and all tendencies in the human person; he discriminates between good and bad tendencies.

The characteristics of Maslow's (1968) self-actualizing people are: "superior perception of reality; increased acceptance of self, of others, of nature; increased spontaneity; increase in problem centering; increased detachment and desire for privacy; increased autonomy, and resistance to enculturation, greater freshness of appreciation, and richness of emotional reaction, higher frequency of peak experiences; increased identification with the human species; changed (the clinician would say, improved) interpersonal relations; more democratic character structure; greatly increased creativeness; certain changes in the value system (Maslow, 1968, page 26)."

Maslow is explicit that self-actualization in this defining sense is an uncommon achievement attained only in late maturity.

Smith (1973) summarized many aspects of Maslow's doctrine of self-actualization and emphasized the process of self-actualization. Smith interpreted it as characterising a person's actions or experiences when they are in congruence with his existing self (rather than dictated by external constraint or conformity, or driven by inner compulsions that are alien to the self).

Smith's (1973) summary is one of the more comprehensive on self-actualization in the Journal of Humanistic Psychology.

Shostrom (1967) defines self-defeating behavior as manipulative behavior, and "creative behavior as actualizing behavior (page 9)." "Actualizing behavior is simply manipulative behavior expressed more creatively."

"Shostrom accepts Perl's statement that each person has two sides, a "top-dog" and an "under-dog." "Top-dog" is the active side in that it is more energetic, commanding and authoritative. The "under-dog" is the passive side in that it is compliant and submissive. Each of these sides can be expressed in either a manipulative or a creative, actualizing way (1967, page 9)."

The Journal of Creative Behavior, on the other hand, devotes much space to creativity, but does not seem to subsume "creativity" under self-actualization. Only one major article in this journal seems to tie the concepts together.

Foster (1968) emphasizes "self-actualization, like true psychological health, requires both creativity and human relatedness. Deprivation of either reduces the individual to less than his true self." In sum, her article seems to echo many others where creativity and self-actualization are synonymous.

Dawe and Fredian (1974) have summarized much of the research on creativity, and creative personalities. But at this time no research has been found that explicitly spells out the psychometric relationship, if any, between creativity and self-actualization.

Torrance (1962) initially pointed out differences between people who are highly creative in originality or elaboration. Good elaborators are those who are able to take an idea or task and spell out the detail. They can embroider a simple idea to make it fancy and attractive. Original thinkers, on the other hand, are those who are more able to get away from the obvious and break away from the beaten path. Being more innovative than the elaborating thinkers, they see relationships and think of ideas and solutions different from others. (Naturally, the most creatively

4

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gifted individuals may be outstanding in both of these divergent thinking abilities). Extensive research by Dawe (1974) has substantiated the differences between these original thinkers and good elaborators.

THE TESTS AND WHAT THEY MEASURE

Shostrom (1966) has developed an instrument, the Personal Orientation Inventory, (POI), to measure self-actualization as currently conceived in humanistic existential psychology. Shostrom (1966) defines the self-actualized person as "one who is more fully functioning and lives a more enriched life than does the average person. Such a person is seen as developing and using all his unique capabilities, or potentialities, free of inhibitions and emotional turmoil of those less self-actualized."

Various research projects on the POI have shown it is reliable (Haridi and May, 1968); resistant to faking good (Warehime and Foulds, 1973); and has been factor-analyzed with good results (Tosi and Hoffman, 1972).

The Torrance Tests of Creative Thinking have verbal and figural forms. The number of relevant responses produced by a subject yields one measure of identical fluency. The number of shifts in thinking or number of different categories or questions, causes, or consequences gives one measure of flexibility. The statistical infrequency of these questions, causes, or consequences or the extent to which the response represents a mental leap or departure from the obvious and commonplace gives one measure of originality. The detail and specificity incorporated into the questions and hypotheses provide one measure of the ability to elaborate.

Pearson and Maddi (1966) developed the Similes Preference Inventory (SPI) as a structured measure of the tendency toward variety. Their ex-

tensive evidence suggests that the SPI is a reliable, simple method to assess the intensity of the active, interoceptive tendency toward variety (creativity).

Correlations of .34 and .37 were reported (Pearson and Maddi, 1966) between the SPI and a measure of originality in two different samples. Daw's research (1969) revealed correlations of .42 and .32 between the same SPI and a different measure of originality (TTCT).

Lafferty's (1973) Life Style checklist is a self-description inventory consisting of some 240 adjectives and phrases of two to seven words, that are scored on twelve scales, one of which is the self-actualization scale. The instrument is based on the theory that interpersonal relationships are a "field" of tensions and needs produced by people attempting to satisfy their basic concerns. That is why Lafferty's (1973) Life Styles are based on a field theory of interpersonal relations.

THE SAMPLE

The data for this project was collected by administering the four tests to 177 graduate and undergraduate students. Half of the students were Vincentian seminary (C.M.) students. The undergraduate seminarians ranged in age from 18 to 24 and were majoring in philosophy. The graduate seminarians ranged in age from 22 to 36, and were doing graduate work in theology. All seminarians were full-time students.

The rest of the sample consisted of undergraduate students ranging in age from 18 to 43, and graduate students who were employed full time in various jobs throughout private industry, their age range being from 22 to 42.

RESULTS

There is a positive, statistically significant correlation ($P < 0.001$) (Alwan and Parisi, 1974) between originality and elaboration on the TTCT; there is a positive, statistically significant correlation ($p < 0.001$) between the POI self-actualization scale and the Human Synergistics Life Styles, self-actualization scale; but there were no correlations between any of the two creativity measures and any of the two self-actualization measures. (Table I)

Table II reveals the means and the standard deviations for the total sample on five major variables.

In Table III, when all seminary students in the sample ($n=88$) are compared with all university students ($n=89$) on the SPI variable, the seminary students are more creative to a statistically significant degree ($p < 0.005$); on the TTCT originality variable, the seminary students are much more originally creative than the university students to a statistically significant degree ($p < 0.001$); on the TTCT elaboration variable, the seminary students are much better elaborators to a statistically significant degree ($p < 0.001$); on the human Synergistics Life Styles, self-actualization variable, the university students are more highly self-actualized than the seminary students to a statistically significant degree ($p < 0.01$).

In Table IV, when all seminary graduate students in the sample ($n=35$) are compared with all university graduate students ($n=38$): on the SPI variable, the seminary graduate students are much more creative to a statistically significant degree ($p < 0.001$); on the TTCT elaboration variable, the seminary graduate students are better elaborators to a statistically significant degree ($p < 0.003$). On the two self-actualization variables, there are no differences that are significant.

In Table V, when the seminary undergraduate students ($n=53$) are compared with the university undergraduate students ($n=51$): on the TICT elaboration variable, the seminary students are much better elaborators to a statistically significant degree ($p<0.001$); but the opposite is true on the Human Synergetics Life Styles, self-actualization scale where the university students are much more self-actualized to a statistically significant degree ($p<0.005$).

Table VI reveals the means and the standard deviation for the higher (upper 25%) and the lower (lower 25%) sub-samples on the five major variables.

Table VII reveals a significant difference between the upper and lower 25% of the sample on each of the major variables. The higher scorers on each of the major variables, as was expected, were different to a statistically significant degree ($p<0.001$) from the lowest 25% of the sample.

Table VIII reveals the mean scores of four major variables after the split based on the fifth major variable. For example, the originality scores were divided into two groups based on the upper 25% and the lower 25% on the SPI scores. The means were then 24.86363 for the lower, and 25.00000 for the upper group. This shows a small spread between the groups that is obviously not significant. (see Tables IX and X). Although this spread is in the right direction, that is, the lower group on the SPI also tends to score lower on originality and likewise, the higher group on the SPI tends to score higher on originality. Those people that scored low on the SPI tended to score higher on the self-actualization inventory than the higher group of the SPI. (Significance in Tables IX and X); the lower elaborators tended to score higher on self-actualization than the high elaborators (Significance in Tables IX and X); and the lower scorers

on self-actualization tended to be better elaborators than the high group. In comparing several cells, it is not surprising to find an occasional small reversal of the general trend. While the direction (of the split) is not what is expected, it is not statistically significant. A difference of this magnitude could occur by chance in a random population where no significant effect exists at all.

Table IX reveals the F ratio for the Multivariate Test of Equality of Mean Vectors for the five major variables.

On both the originality and the elaboration splits (of the lower and higher 25%) there are additional variables affecting the split (see Table X) to a statistically significant degree ($p < 0.0001$); on both the SAV (POI self-actualization scale) and the Self-A (Human Synergistics Life Styles self-actualization scale) splits, there are additional variables affecting the split to a statistically significant degree ($p < 0.0017$, $p < 0.0033$ respectively) (see Table X).

Table X reveals a high co-relation between the highly original as measured by the TTCT and the high elaborators to a statistically significant degree on both the univariate F and the Step-down F ($P < 0.001$, $p < 0.001$); high elaborators as measured by the TTCT tend to be highly original as measured by the TTCT to a statistically significant degree on both the univariate F and the Step-down F ($p < 0.001$, $p < 0.001$); the highly self-actualized as measured by the POI tend to be highly self-actualized as measured by the Human Synergistics Life Styles self-actualization variable to a statistically significant degree on both the univariate F and the Step-down F ($p < 0.0015$, $p < 0.006$ respectively); the highly self-actualized as measured by the Human Synergistics Life Styles self-actualization variable tend to be highly self-actualized to a statistically significant

degree on both the univariate F and the Step-down F ($p < 0.0005$, $p < 0.0006$). (Note the reverse is true also -- low scorers on one are also low scorers on the other.)

The step-down F test gives a measure of the variance accounted for by a particular variable after the effects of all other variables have been removed.

The univariate F ignores the effect of all other variables while the step-down F compensates for the effect of all other variables.

In this case, the step-down F is preferred because there are many variables interacting with each other.

As measured by the Step-down F test, high elaborators tend to be highly self-actualized as measured by the Human Synergistics Life Styles self-actualization variable to a statistically significant degree ($p < .01$).

Only one of all the tests shows any relationship between creativity and self-actualization that is highly significant. (Elaborators/Self-actualization).

If there were a really highly significant relationship between these two traits, one might expect it to show up regardless of how they were measured.

DISCUSSION

The fact that there are no extremely clear-cut differences on the POI self-actualization variable scales between groups may be explained by the following.

Shostrom and Knapp (1966) had previously reported significant negative correlations between the Depression, Psychasthenia, and Social Introversion scales of the MMPI and the scales of the POI. Therefore, Foulds (1969) concludes that the Personal Orientation Inventory (POI)

"purports to assess particular personality variables commonly associated with self-actualization, positive mental health, or psychological well-being -- terms that Maslow appears to use synonymously." The self-actualized person is one who is functioning more fully than the average individual and is living a more enriched life.

Thus, this research may really be measuring not highly self-actualized people in Maslow's optimal sense of the term, but rather ordinary people who just have good, positive mental health.

Perhaps, if a more obviously creative group had been sampled, such as exceptionally creative artists, architects and the like, (as summarized in Daw, 1974), then more significant differences might have been found. The sample here may have simply been from the relatively undistinguished middle range of the population, that did not include enough individuals who are in fact more highly creative or more highly self-actualized.

Finally, the instruments selected here may not be measuring the concepts as clearly as possible. It seems likely that the creativity (TTCT) tests are spelling out differences more distinctly than the self-actualization measures.

In conclusion, the data seem to suggest highly creative people may be more self-actualized but it is not measured here. And highly self-actualized people may be more creative, but it is not measured here.

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TABLE 2
PEARSON CORRELATION COEFFICIENTS

	SPI	ORIG	ELAB	SAV
SPI	1.0000 s=0.001	0.0819 s=0.278	0.1024 s=0.175	0.0933 s=0.217
ORIG	0.0819 s=0.278	1.0000 s=0.001	0.4374 s=0.001	0.0778 s=0.303
ELAB	0.1024 s=0.175	0.4374 s=0.001	1.0000 s=0.001	0.1096 s=0.147
SAV	0.0933 s=0.217	0.0778 s=0.303	0.1096 s=0.147	1.0000 s=0.001
SELF A	0.0187 s=0.805	0.0316 s=0.676	-0.1014 s=0.67	0.3152 s=0.001

COEFFICIENTS

ELAB

SAV

SELF A

0.1024
s=0.75

0.0933
s=0.217

0.0187
s=0.805

0.4374
s=0.001

0.0778
s=0.303

0.0316
s=0.676

1.0000
s=0.001

0.1096
s=0.147

-0.1044
s=0.167

0.1096
s=0.007

1.0000
s=0.001

0.3152
s=0.001

-0.1044
s=0.007

0.3152
s=0.001

1.0000
s=0.001

TABLE II

MEANS AND STANDARD DEVIATIONS OF THE TOTAL SAMPLE ON THE MAJOR VARIABLES

	Mean	Mode	Std. Error	Std. Dev.	Median
SPI	11.9096	3.000	0.847	11.2731	7.750
ORIG	24.2655	24.00	0.625	8.3178	23.545
ELAB	64.6384	41.000	2.509	33.3826	58.125
SAV	19.6102	20.000	0.251	2.8566	19.850
SELF.A.	20.5085	16.000	0.620	8.2491	20.050

STANDARD DEVIATIONS OF THE TOTAL SAMPLE ON THE MAJOR VARIABLES

Mode	Std. Error	Std. Dev.	Median	Variance
0.000	0.247	11.2731	7.750	127.083
4.00	0.625	8.3178	23.545	69.185
1.000	2.509	33.3826	58.125	1114.391
0.000	0.251	2.8566	19.850	8.160
6.000	0.620	8.2491	20.050	68.047

TABLE III

Statistical Comparison Between University and Seminary Students
on Creativity and Self-Actualization Variables

Variable	Group	Cases	Mean	Standard Deviation	Pooled Variance Estimate	
					T Value	2-Tail Probability
SPI	All C.M.s	88	14.2841	12.635	2.84	0.005
	All D.P.s	89	9.5618	9.226		
ORIG	All C.M.s	88	26.4659	8.142	3.62	0.000
	All D.P.s	89	22.0899	7.950		
ELAB	All C.M.s	88	26.7954	38.627	5.16	0.000
	All D.P.s	89	32.6180	21.442		
SAV	All C.M.s	88	19.5795	2.621	-0.14	0.888
	All D.P.s	89	19.6404	3.087		
SELF A	All C.M.s	88	18.9432	7.717	-2.55	0.012
	All D.P.s	89	22.0562	8.506		

TABLE IV

Statistical Comparison Between University and Seminary Graduate
Students on Creativity and Self-Actualization Variables

Variable	Group	Cases	Mean	Standard Deviation	Pooled Variance T Value	Estimate 2-Tail Probability
SPI	C.M.s	35	18.6286	13.530	-3.56	0.001
	D.P.s	38	9.2368	3.644		
ORIG	C.M.s	35	26.8000	8.098	-3.31	0.001
	D.P.s	38	20.3158	8.600		
ELAB	C.M.s	35	78.2857	42.163	-3.13	0.003
	D.P.s	38	53.7632	22.779		
SAV	C.M.s	35	20.2857	2.550	-0.37	0.711
	D.P.s	38	20.0526	2.780		
SELF A	C.M.s	35	20.6857	8.318	0.67	0.508
	D.P.s	38	22.000	8.061		

TABLE V

Statistical Comparison Between University and Seminary Undergraduate Students on Creativity and Self-Actualization Variables

Variable	Group	Cases	Mean	Standard Deviation	Pooled Variance T Value	Estimate 2-Tail Probability
SPI	C.M.s	53	11.4151	11.239	-0.78	0.437
	D.P.s	51	9.8039	1.360		
ORIG	C.M.s	53	26.2453	8.241	-1.86	0.065
	D.P.s	51	23.4118	7.274		
ELAB	C.M.s	53	75.8113	36.490	-4.12	0.004
	D.P.s	51	51.7647	20.177		
SAV	C.M.s	53	19.1132	2.514	0.38	0.705
	D.P.s	51	17.3333	3.210		
SELF A	C.M.s	53	17.7924	6.718	2.79	0.005
	D.P.s	51	22.0980	8.962		

TABLE VI

MEANS AND STANDARD DEVIATIONS ON THE FIVE VARIABLE
FOR THE TOP 25% COMPARED WITH THE LOWEST 25%

	Cases	mean	Variance	Standard Deviation
SPI				
Low	47	2.19149	.813838	.924034
High	48	27.3125	94.0492	9.6479
ORIG				
Low	45	14.5111	7.8192	2.80926
High	35	32.6857	4.8655	2.23306
ELAB				
Low	47	30.1915	67.419	8.33181
High	46	108.652	73.832	27.1631
SAY				
Low	36	15.4167	3.05	1.74642
High	69	22.3333	1.6667	1.29099
SELF A				
Low	44	10.1591	9.2527	3.10346
High	46	30.0217	11.551	3.36973

TABLE VII

STATISTICAL COMPARISONS OF DATA IN TABLE VI
(UPPER & LOWER 25%) BY F-RATIOS AND T-TESTS

	F (Var. ratio)	Prob unequal var	Equal Variable		U
			T Stat	2-tail prob	
SPI					
	110.142	0.00000	17.6782	0.00000	17.8639
ORIG					
	1.59264	0.08391	31.3294	0.00000	32.237
ELAS					
	10.6287	0.00000	18.9162	0.00000	18.7467
SAV					
	1.23	0.01659	23.0146	0.00000	20.9618
SELF A					
	1.17971	0.29360	29.0552	0.00000	29.1091

STATISTICAL COMPARISON OF WPA TO TABLE VI
(UPPER & LOWER 25%) BY F-RATIOS AND T-TESTS

al var	Equal Variable		Unequal Variable	
	T Stat	2-tail prob	T Stat	2-Tail prob
00	17.6782	0.00000	17.8639	0.00000
91	31.3294	0.00000	32.237	0.00000
00	18.9162	0.00000	18.7467	0.00000
59	23.0145	0.00000	20.9618	0.00000
60	29.0552	0.00000	29.1091	0.00000

TABLE VIII

Observed Cell Means On Data Used Upon the Split of Fi

	SPI	ORIG	ELAB	SAV
SPI				
Low		24.86363	63.20454	19.88635
High		25.00000	68.00000	20.31520
ORIG				
Low	10.11111		46.88889	18.93332
High	12.40936		86.34042	19.91489
ELAB				
Low	13.10000	21.43999		19.00000
High	13.47619	30.30951		20.23808
SAV				
Low	10.37143	22.51428	56.05713	
High	14.23529	25.45587	69.17647	
SELF A				
Low	11.02273	23.70454	62.63635	18.63635
High	11.85000	24.81999	68.75999	20.64000

Means On Data Used Upon the Split of Five Variables

ORIG	ELAB	SAV	SELF A
24.86363	63.20454	19.88635	21.70454 **
25.00000	68.00000	20.31520	21.35416

	46.89889	18.93332	19.75555
	86.34042	19.91489	21.82977

21.43999		19.00000	21.06000 **
30.30951		20.23808	18.14285

22.51428	56.05713		17.77142
25.45587	69.17647		23.44116

23.70154	62.63635	18.63635	
24.81999	68.75999	20.64000	

Lower 25% vs Upper 25%

F Ratio for Multivariate Test of Equality of Mean Vectors

SPI	0.3388	p 0.8511
ORIG	9.7666	p 0.0001*
ELAB	11.4120	p 0.0001*
SAV	4.6774	p 0.0017**
SELF A	3.6638	p 0.0083**

* See Univariate F and Step down F, Table X

** See Univariate F and Step down F, table X

TABLE X

UNIVARIATE F AND STEP DOWN ON MAJOR VARIABLES

Variable	Hypothesis Mean SQ	Univariate F	P less than	Step down
ORIG as independent variable				
spi	262.3657	2.0417	0.1593	2.0417
elab	35780.8516	35.5756	0.0001 ***	33.1202
sav	22.1497	2.8619	0.0942	1.6895
self a	90.2091	1.6036	0.2087	1.1715
+++++				
ELAB as independent variable				
spi	2.0025	0.0513	0.9018	0.0153
orig	1795.6909	33.6592	0.0001 ***	33.2932
sav	34.9387	4.8172	0.0308	2.7880
Self a	194.2434	2.7444	0.1011	6.5554

SAV as independent variable				
spi	344.9714	2.4644	0.1196	2.4643
orig	199.9411	2.8142	0.0966	2.0861
elab	3977.0251	3.0600	0.0833	0.8192
self a	742.7869	10.7866	0.0015 **	12.7501
+++++				
SELF A as independent variable				
spi	16.4071	0.1349	0.7143	0.1348
orig	29.1204	0.4157	0.5207	0.4282
elab	351.6746	0.3546	0.5531	0.8575
sav	93.9585	13.1415	0.0005 ***	13.0463

* p < .01 *** p < .0005
 ** p < .001 **** p < .0001

UNIVARIATE F AND STEP DOWN ON MAJOR VARIABLES

Variable	Mean SQ	Univariate F	P less than	Step down F	P less than
Variable					
2.3657	2.0417	0.1593		2.0417	0.1593
80.8516	35.5756	0.0001 ***		33.1202	0.0001 ***
1.1497	2.8619	0.0942		1.6895	0.1971
9091	1.6036	0.2087		1.1715	0.2821
+++++					
Variable					
0025	0.0513	0.9018		0.0153	0.0919
95.6909	33.6592	0.0001 ***		33.2932	0.0001 ***
9087	4.8172	0.0308		2.7880	0.0986
1.2434	2.7444	0.1011		6.5554	0.0122 *

Variable					
1.9714	2.4644	0.1196		2.4643	0.1196
9.9411	2.8142	0.0966		2.0861	0.1518
7.0251	3.0600	0.0833		0.8192	0.3677
1.7869	10.7866	0.0015 **		12.7501	0.0006 **
+++++					
Variable					
4071	0.1349	0.7143		0.1348	0.7144
1204	0.4157	0.5207		0.4282	0.5146
6746	0.3546	0.5531		0.8575	0.3570
9585	13.1415	0.0005 ***		13.0463	0.0006 **

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* p < .0005
 * p < .0001